

Rpt. 5a.

REPORT ON BOILERS.

57275
No. 56955

Received at London Office

29 JUL 1936
26 MAY 1936

Date of writing Report

19

When handed in at Local Office

2. 5. 36

Port of

Glasgow

No. in Survey held at

Glasgow

Reg. Book.

Date, First Survey

9. 12. 35

Last Survey

29-4-

1936

on the

new steel S/S "PYROPE"

(Number of Visits

22)

Gross

509

Tons

Net 206

Master

Built at

Bowling

By whom built

Scott & Son

Yard No. 338

When built 1936

Engines made at

Glasgow

By whom made

Aitchison Blair Ltd

Engine No. 200

When made 1936

Boilers made at

Glasgow

By whom made

Dunn Rowan & Co Ltd

Boiler No. 417

When made 1936

Nominal Horse Power

Owners

Wm Robertson

Port belonging to

Glasgow

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Bohills Ltd

(Letter for Record (S))

Total Heating Surface of Boilers

2000 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

one single ended

Working Pressure 200

Tested by hydraulic pressure to

350

Date of test

29-4-36

No. of Certificate

19716

Can each boiler be worked separately

Area of Firegrate in each Boiler

60.4 sq ft

Area of each set of valves per boiler

per Rule

Pressure to which they are adjusted

Are they fitted with easing gear

yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

15'-0"

Length

10'-0"

Shell plates: Material

Steel

Tensile strength

29.33 tons

Thickness

15/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR

Pitch of rivets

Diameter of rivet holes in

circ. seams

F 1 1/4"

B 1 3/8"

Pitch of rivets

F 3.22"

B 3.747"

Percentage of strength of circ. end seams

plate

F 61.1

B 63.2

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.33

rivets

89.6

combined

88.5

Working pressure of shell by Rules

200

Thickness of butt straps

outer

1"

inner

1 7/8"

No. and Description of Furnaces in each Boiler

Three Deighton Corrugated

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

45 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

9/8"

Description of longitudinal joint

welded

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

202

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 9/32"

Pitch of stays

19 x 20

How are stays secured

D.N.

Working pressure by Rules

202

Tube plates: Material

front

steel

back

"

Tensile strength

26-30 tons

Thickness

29/32"

25/32"

Lean pitch of stay tubes in nests

10.2"

Pitch across wide water spaces

14 1/4"

Working pressure

front

202

back

210

Orders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

Centre

2 @ 8 5/8 x 7 1/8"

Length as per Rule

32 9/16"

Distance apart

9 1/2"

No. and pitch of stays

Each

3 @ 8"

Working pressure by Rules

202

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

2 3/32"

Back

2 1/32"

Top

2 3/32"

Bottom

1"

Pitch of stays to ditto: Sides

8 1/4 x 10 3/8"

Back

9 1/4 x 8"

Top

9 1/2 x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

201

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

29/32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

25/32"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

202

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay,

or

Over threads

3"

No. of threads per inch

6

Area supported by each stay

385 sq in

Working pressure by Rules

205

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part,

or

Over threads

1 5/8" & 1 3/4"

No. of threads per inch

9

Area supported by each stay

768.88 sq in

010416-010427-0240

Lloyds Register
Foundation

Working pressure by Rules 200 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 3/4" Over threads ✓

No. of threads per inch 9 Area supported by each stay 91" Working pressure by Rules 200

Tubes: Material Steel External diameter ^{Plain} 3 1/4" ^{Stay} 3 1/4" Thickness ^{8 w.g.} 1/4" ^{5/16"} 3/8" No. of threads per inch 9

Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 219 Manhole compensation: Size of opening

shell plate 15 1/2" x 19 1/2" Section of compensating ring 9 1/2" x 1 5/16" No. of rivets and diameter of rivet holes 32 @ 1 3/8"

Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged 3" Steam Dome: Material Steel

Tensile strength 26-30 tons Thickness of shell 1 1/16" Description of longitudinal joint forge welded

Diameter of rivet holes — Pitch of rivets — Percentage of strength of joint ^{Plate} — ^{Rivets} —

Internal diameter 28.625" Working pressure by Rules 200 Thickness of crown 1 3/32" No. and diameter

stays none Inner radius of crown flat Working pressure, by Rules 200

How connected to shell DR Size of doubling plate under dome 3-10" outside dia. 10" hole in plate Diameter of rivet holes and pitch

of rivets in outer row in dome connection to shell 15 1/16" 3 1/4"

Type of Superheater none Manufacturers of ^{Tubes} — ^{Steel castings} —

Number of elements — Material of tubes — Internal diameter and thickness of tubes —

Material of headers — Tensile strength — Thickness — Can the superheater be shut off at

the boiler be worked separately — Is a safety valve fitted to every part of the superheater which can be shut off from the boiler —

Area of each safety valve — Are the safety valves fitted with easing gear — Working pressure as per

Rules — Pressure to which the safety valves are adjusted — Hydraulic test pressure —

tubes —, castings — and after assembly in place — Are drain cocks or valves fitted

to free the superheater from water where necessary —

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with —

The foregoing is a correct description,
 For David Rowan & Co. Ltd. Manufacture
 Arch. W. Grierson

Dates of Survey ^{During progress of} 1935 Dec: 9. 16. 17. 18. 19. 20. 23 ^{work in shops - -} 27. 30 (1936) Jan: 9 Feb: 5 Mar: 11 Are the approved plans of boiler and superheater forwarded herewith yes
^{while building} ^{During erection on} 5. 16. 24. 31 Apr: 9. 10. 17. 20. 22. 28. 30 (If not state date of approval.)
 board vessel - - - Total No. of visits 22

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. "Rowan" Ship No. 51970

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
The materials and workmanship are good.
The boiler has been constructed under special survey.
2/5/36

Survey Fee £13 : 6 : When applied for, 5. 5. 1936
 Travelling Expenses (if any) £ : : When received, 4. 6. 1936

S. Davis.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 5-MAY 1936
 Assigned TRANSMIT TO LONDON

// See G.S. Rpt. No. 57275

